

REMARKS/ARGUMENTS

The above-referenced Office action rejected independent claims 1, 2, 11, and 20 of the present application under 35 U.S.C. 102(e) as anticipated by Chow, et al. Chow discloses a preferred embodiment including "...a window 40 overlying the clear compound 38 and resting on the stud bumps 34. Thus, the stud bumps 34 act as a stand-off of the window 40." (Col. 4, lines 54-56). Applicant has amended claims 1, 2, 11, and 20 to clarify that the present invention requires no stud bumps or other stand-off to align the aperture member with radiation-sensitive portion of the optical semiconductor. The present invention achieves acceptable alignment in an easy and inexpensive manner by interposing only a thin, relatively uniform layer of adhesive between the aperture member and the radiation-sensitive portion of the optical semiconductor. Further, Chow discloses that "[t]he stud bumps have a height of about 3 mils..." (Col. 4, line 35). New claim 34 limits the distance between the aperture member and the radiation-sensitive portion of the optical semiconductor to within 2 mils. Applicant therefore respectfully requests consideration and allowance of amended claims 1, 2, 11, and 20, and of new claim 34.

The detailed action provides no explanation of the rejections of dependent claims 3, 12, and 21. However, since these claims depend from amended claims 2, 11, and 20, respectively, each of which Applicant believes to be in condition for allowance, Applicant respectfully requests that dependent claims 3, 12, and 21 also be reconsidered and allowed.

Dependent claims 4, 13, and 22 were rejected over Chow with a citation to col. 4, lines 62-64. However, dependent claims 4, 13, and 22 are directed to the use of a programmable pick-and-place semiconductor assembly machine to select the aperture member and apply the aperture member to the transparent adhesive element. In contrast, Chow discloses that "[t]he clear compound 38 can be deposited onto the sensor active area 26 by any dispensing system. Then, window 40 is placed on top of the clear

compound **38** (and the stud bumps **34**).\" (Col. 4, lines 62-64). Chow discloses use of an unspecified dispensing system for placing adhesive on a sensor, whereas the present invention may use a programmable pick-and-place assembly machine to choose and place an aperture member. Chow is silent as to a method for placing an aperture member. These operations involve different devices and different parts, have different purposes, and are not interchangeable. For example, a programmable pick-and-place assembly machine allows the present invention to select an aperture member with different characteristics for each sequentially assembled package. Chow discloses no such flexibility. Finally, as claimed in new claim 35, adhesive may be applied first to the aperture member rather than to the radiation-sensitive portion. Applicant respectfully requests reconsideration and allowance of dependent claims 4, 13, and 22, and allowance of new claim 35.

Dependent claims 5-6 and 14-15 were rejected over Chow with a citation to \"an adhesive tape **24**.\" However, Chow refers only to \"...a low stress, low modulus die attach adhesive **24**...\" (col. 3, line 67 and col. 4, line 1) and makes no mention of a specific form or formulation of adhesive. Moreover, since claims 5-6 depend from amended claim 2 and claims 14-15 depend from amended claim 11, each of which Applicant believes to be in condition for allowance, Applicant respectfully requests that dependent claims 5-6 and 14-15 also be reconsidered and allowed.

Dependent claims 7, 16, and 27 were also rejected over Chow. However, claim 7 depends from amended claim 2, claim 16 depends from amended claim 11, and claim 27 depends from claim 24, which in turn depends from amended claim 20. As Applicant believes that amended claims 2, 11, and 20 are allowable, Applicant respectfully requests reconsideration and allowance of dependent claims 7, 16, and 27.

Dependent claims 8, 17, and 28 were also rejected over Chow. However, claim 8 depends from dependent claim 7, which in turns depends from amended claim 2; claim

17 depends from dependent claim 16, which in turn depends from amended claim 11; and claim 28 depends from dependent claim 27, which depends from dependent claim 24, which in turn depends from amended claim 20. As Applicant believes that amended claims 2, 11, and 20 are allowable, Applicant respectfully requests reconsideration and allowance of dependent claims 8, 17, and 28.

Dependent claims 9, 10, 19, and 29-30 were also rejected over Chow. No mention was made of claim 18 in the detailed action. However, claim 10 depends from claim 9, which depends from amended claim 2; claim 19 depends from claim 18, which depends from amended claim 11; and claim 30 depends from claim 29, which in turn depends from amended claim 20. As Applicant believes that amended claims 2, 11, and 20 are allowable, Applicant respectfully requests allowance of dependent claim 18 and reconsideration and allowance of dependent claims 9, 10, 19, and 29-30.

The detailed action makes no mention of claim 23. Applicant respectfully requests allowance of claim 23.

Dependent claim 24 was also rejected over Chow. However, claim 24 depends from amended claim 20. As Applicant believes that amended claim 20 is allowable, Applicant respectfully requests reconsideration and allowance of dependent claim 24.

Dependent claims 25 and 26 were also rejected over Chow. However, claims 25 and 26 depend from amended claim 20. As Applicant believes that amended claim 20 is allowable, Applicant respectfully requests reconsideration and allowance of dependent claims 25 and 26.

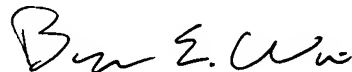
Dependent claim 31 was rejected under 35 U.S.C. 103(a) as obvious over Chow in view of Hoffman. However, claim 31 depends from claim 24, which in turn depends

from amended claim 20. As Applicant believes that amended claim 20 is allowable, Applicant respectfully requests reconsideration and allowance of dependent claim 31.

Each embodiment disclosed by Chow includes a "...perimeter ring **20** that forms a bond line. The perimeter ring **20** has a height that is about the same as a thickness of the leadframe **12**." (Col. 3, lines 62-65). New claims 32 and 33 clarify that the present invention includes no perimeter ring or other stand-off between the optical semiconductor and the lead frame, interposing only a thin, relatively uniform layer of adhesive. Applicant respectfully requests consideration and allowance of new claims 32 and 33.

Applicant submits herewith a request for a 2-month extension of time. Fee payments for said extension and for four additional independent claims are submitted on forms PTO/SB/17 and PTO-2038. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



Bruce E. Weir
Reg. No. 48,191
Tel.: (301) 977-6009
November 10, 2004

Attachments: Request for 2-Month Extension of Time
PTO/SB/17
PTO-2038

Application No. 10/613,089
Amendment dated 11/10/2004
Reply to Office action of 06/28/2004

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on 11/10/2004.

Name of person signing this certificate:

Bruce E. Weir

Signature Bruce E. Weir